

Amendments to the Claims

Please cancel Claims 3, 5 and 7 without prejudice to or disclaimer of the subject matter recited therein.

Please amend Claims 1, 2, 4, 6, 8 and 11 to read as follows.

1. (Currently amended) A liquid detection method comprising:
a detection step of detecting electromagnetic waves radiated from an area of a discharge path of liquid discharged from a liquid supply source by using a detection unit provided near the discharge path;
a minimize step of minimizing electromagnetic waves radiated from a medium other than the liquid or variation in the electromagnetic waves during detection of the electromagnetic waves in said detection step; and
a determination step of determining whether or not the liquid is present and, if present, determining the amount of the discharged liquid based on the electromagnetic waves detected in said detection step,
wherein the electromagnetic waves are infrared rays and said detection step effects detection with an infrared sensor,
wherein said minimize step is effected by using a housing that covers the infrared sensor and an infrared ray detection field of the infrared sensor, and

wherein a steady air flow is generated inside the housing by providing an air intake opening on the housing, and a fan at a position opposite the air intake opening on the housing.

2. (Currently amended) A liquid detection apparatus comprising:
detection means, provided near a discharge path of liquid discharged from a liquid supply source, for detecting electromagnetic waves radiated from an area of the discharge path;

suppression means for minimizing electromagnetic waves radiated from a medium other than the liquid or variation in the electromagnetic waves during detection of the electromagnetic waves by said detection means; and

determination means for determining whether or not the liquid is present and, if present, determining the amount of the discharged liquid based on the electromagnetic waves detected by said detection means,

wherein the electromagnetic waves are infrared rays and said detection means comprises an infrared sensor,

wherein said suppression means comprises a housing that covers the infrared sensor and an infrared ray detection field of the infrared sensor, and

wherein an air intake opening is provided on the housing, and a fan is provided at a position opposite the air intake opening on the housing so as to generate a steady air flow inside the housing.

Claim 3 (cancelled)

4. (Currently amended) The apparatus according to claim 3 2, wherein said suppression means comprises a shield provided in front of a source of infrared rays radiated from a medium other than the liquid.

Claim 5 (cancelled)

6. (Currently amended) The apparatus according to claim 5 2, wherein the housing is provided with an opening for passage of the discharged liquid.

Claim 7 (cancelled)

8. (Currently amended) The apparatus according to claim 3 2, wherein the liquid includes ink.

9. (Previously presented) The apparatus according to claim 8, wherein the liquid supply source comprises an inkjet printhead, and the infrared sensor is located in front of ink discharge nozzles of the inkjet printhead, near the discharge path of ink droplets discharged from the inkjet printhead.

10. (Previously presented) The apparatus according to claim 8, wherein the liquid supply source comprises an ink tank, and the infrared sensor is located near a tube connected to an outflow outlet provided in the ink tank.

11. (Currently amended) A printing apparatus using a liquid detection apparatus according to ~~anyone~~ any one of claims 2-10 2, 4, 6 and 8-10, comprising:

an inkjet printhead having an electrothermal transducer which generates heat energy to be applied to ink in order to discharge the ink by using the heat energy; and

adjustment means for adjusting the temperature of the ink for detection of ink droplets by the liquid detection apparatus by applying electric current to the electrothermal transducer.